

IFWO

RAW SEQUENCE LISTING

DATE: 08/23/2004

PATENT APPLICATION: US/10/656,029

TIME: 10:36:28

Input Set : A:\PTO.YF.txt

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Output Set: N:\CRF4\08232004\J656029.raw
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      5 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR RAPID DEVELOPMENT OF
              SCREENING ASSAYS
      8 <130> FILE REFERENCE: VPI/02-143WO2
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/656,029
     11 <141> CURRENT FILING DATE: 2003-09-05
    13 <150> PRIOR APPLICATION NUMBER: 60/408,297
    14 <151> PRIOR FILING DATE: 2002-09-05
    16 <160> NUMBER OF SEQ ID NOS: 86
    18 <170> SOFTWARE: PatentIn version 3.2
    20 <210> SEQ ID NO: 1
    21 <211> LENGTH: 795
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    27 <222> LOCATION: (1)..(795)
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    35 ttg ggt gca cga gtg ggt tac atc gaa ctg gat ctc aac agc ggt aag
                                                                              96
    36 Leu Gly Ala Arg Val Gly Tyr Ile Glu Leu Asp Leu Asn Ser Gly Lys
    39 atc ctt gag agt ttt cgc ccc gaa gaa cgt ttt cca atg atg agc act
                                                                             144
    40 Ile Leu Glu Ser Phe Arg Pro Glu Glu Arg Phe Pro Met Met Ser Thr
               35
                                    40
    43 ttt aaa gtt ctg cta tgt ggc gcg gta tta tcc cgt gtt gac gcc ggg
                                                                             192
    44 Phe Lys Val Leu Leu Cys Gly Ala Val Leu Ser Arg Val Asp Ala Gly
    47 caa gag caa ete ggt ege ege ata eae tat tet eag aat gae ttg gtt
                                                                             240
    48 Gln Glu Gln Leu Gly Arg Arg Ile His Tyr Ser Gln Asn Asp Leu Val
    49 65
                            70
    51 gag tac tca cca gtc aca gaa aag cat ctt acg gat ggc atg aca gta
                                                                             288
    52 Glu Tyr Ser Pro Val Thr Glu Lys His Leu Thr Asp Gly Met Thr Val
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90

55 aga gaa tta tgc agt gct gcc ata acc atg agt gat aac act gcg gcc

56 Arg Glu Leu Cys Ser Ala Ala Ile Thr Met Ser Asp Asn Thr Ala Ala

59 aac tta ctt ctg aca acg atc gga gga ccg aag gag cta acc gct ttt 60 Asn Leu Leu Thr Thr Ile Gly Gly Pro Lys Glu Leu Thr Ala Phe

105

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336

Input Set : A:\PTO.YF.txt

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65 130 135 140	
67 gag ctg aat gaa gcc ata cca aac gac gag cgt gac acc acg atg cct	480
68 Glu Leu Asn Glu Ala Ile Pro Asn Asp Glu Arg Asp Thr Thr Met Pro	
69 145 150 155 160	
71 gca gca atg gca aca acg ttg cgc aaa cta tta act ggc gaa cta ctt	528
72 Ala Ala Met Ala Thr Thr Leu Arg Lys Leu Leu Thr Gly Glu Leu Leu	
73 165 170 175	
75 act cta gct tcc cgg caa caa tta ata gac tgg atg gag gcg gat aaa	576
76 Thr Leu Ala Ser Arg Gln Gln Leu Ile Asp Trp Met Glu Ala Asp Lys	
77 180 185 190	60.4
79 gtt gca gga cca ctt ctg cgc tcg gcc ctt ccg gct ggc tgg ttt att	624
80 Val Ala Gly Pro Leu Leu Arg Ser Ala Leu Pro Ala Gly Trp Phe Ile	
81 195 200 205	600
83 gct gat aaa tct gga gcc ggt gag cgt ggg tct cgc ggt atc att gca	672
84 Ala Asp Lys Ser Gly Ala Gly Glu Arg Gly Ser Arg Gly Ile Ile Ala	
85 210 215 220	=0.0
87 gca ctg ggg cca gat ggt aag ccc tcc cgt atc gta gtt atc tac acg	720
88 Ala Leu Gly Pro Asp Gly Lys Pro Ser Arg Ile Val Val Ile Tyr Thr	
89 225 230 235 240	E.C.O.
91 acg ggg agt cag gca act atg gat gaa cga aat aga cag atc gct gag	768
92 Thr Gly Ser Gln Ala Thr Met Asp Glu Arg Asn Arg Gln Ile Ala Glu	
93 245 250 255	505
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110 20 25 30	
112 Ile Leu Glu Ser Phe Arg Pro Glu Glu Arg Phe Pro Met Met Ser Thr	
113 35 40 45	
115 Phe Lys Val Leu Leu Cys Gly Ala Val Leu Ser Arg Val Asp Ala Gly	
116 50 55 60	
118 Gln Glu Gln Leu Gly Arg Arg Ile His Tyr Ser Gln Asn Asp Leu Val	
119 65 70 75 80	
121 Glu Tyr Ser Pro Val Thr Glu Lys His Leu Thr Asp Gly Met Thr Val	
121 GIU TYL SEL PLO VAL TILL GIU LYS HIS LEU TILL ASP GIY MEC TILL VAL	
122 05 90 124 Arg Glu Leu Cys Ser Ala Ala Ile Thr Met Ser Asp Asn Thr Ala Ala	
124 Arg Gru Led Cys Ser Ara Ara Tre Thr Met Ser Asp Ash Thr Ara Ara 125 100 105 110	
125 100 105 110 125 125 127 Asn Leu Leu Thr Thr Ile Gly Gly Pro Lys Glu Leu Thr Ala Phe	
128 115 120 125 130 Leu His Asn Met Gly Asp His Val Thr Arg Leu Asp Arg Trp Glu Pro	
130 Ded uts wan wer giv was uts var int wid den was wid ith gir bio	

Input Set : A:\PTO.YF.txt

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	Thr	Len	Ala	Ser		Gln	Gln	Leu	Ile	Asp	Trp	Met	Glu	Ala	Asp	Lys	
140		200		180	5				185					190	_	•	
	Val	Δla	G1v		T.e.11	T.e11	Ara	Ser		Len	Pro	Ala	Glv	Trp	Phe	Ile	
143	Val	niu	195	110	БСи	200		200					205				
	Ala	7 ~~		Cor	C111	712	Clv		Λνα	Clv	Sar	Δrα		Tle	Tle	Δla	
	Ата		пур	ser	GIY	AIA	215	Giu	Arg	GIY	DCI	220	Cry	110	110	HLU	
146	31 -	210	a 1	Dece	7 ~~	a1		Dwo	Cor	7\ x c~	Tlo		1727	Tla	Тиг	Thr	
	Ala	ьeu	GIY	Pro	Asp		гуѕ	Pro	ser	Arg		val	vai	TTE	TYL		
	225		_			230		_	~7	-	235		a1	77 -	77-	240	
	Thr	GIY	ser	GIn		Thr	Met	Asp	GIU			Arg	GIII	ше		GIU	
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163	<220	0> F	EATUI	RE:													
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165	<22	2> L (CAT:	ON:	(1)	(8	58)										
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169 170	atg Met	aga	att	caa	cat His					Leu							48
169 170 171	atg Met 1	aga Arg	att Ile	caa Gln	cat His 5	Phe	Arg	Val	Ala	Leu 10	Ile	Pro	Phe	Phe	Ala 15	Ala	48 96
169 170 171 173	atg Met 1 ttt	aga Arg tgc	att Ile ctt	caa Gln cct	cat His 5 gtt	Phe ttt	Arg ggt	Val cac	Ala cca	Leu 10 gaa	Ile acg	Pro ctg	Phe gtg	Phe aaa	Ala 15 gta	Ala aaa	
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169 170 171 173 174 175	atg Met 1 ttt Phe	aga Arg tgc Cys	att Ile ctt Leu gaa	caa Gln cct Pro 20 gat	cat His 5 gtt Val cag	Phe ttt Phe ttg	Arg ggt Gly ggt	Val cac His	Ala cca Pro 25 cga	Leu 10 gaa Glu gtg	Ile acg Thr	Pro ctg Leu tac	Phe gtg Val atc	Phe aaa Lys 30 gaa	Ala 15 gta Val ctg	Ala aaa Lys gat	
169 170 171 173 174 175 177	atg Met 1 ttt Phe	aga Arg tgc Cys	att Ile ctt Leu gaa Glu	caa Gln cct Pro 20 gat	cat His 5 gtt Val cag	Phe ttt Phe ttg	Arg ggt Gly ggt	Val cac His gca Ala	Ala cca Pro 25 cga	Leu 10 gaa Glu gtg	Ile acg Thr	Pro ctg Leu tac	Phe gtg Val atc Ile	Phe aaa Lys 30 gaa	Ala 15 gta Val ctg	Ala aaa Lys gat	96
169 170 171 173 174 175 177 178	atg Met 1 ttt Phe gat Asp	aga Arg tgc Cys gct Ala	att Ile ctt Leu gaa Glu 35	caa Gln cct Pro 20 gat Asp	cat His 5 gtt Val cag Gln	Phe ttt Phe ttg Leu	Arg ggt Gly ggt Gly	Val cac His gca Ala 40	Ala cca Pro 25 cga Arg	Leu 10 gaa Glu gtg Val	acg Thr ggt Gly	Pro ctg Leu tac Tyr	Phe gtg Val atc Ile 45	Phe aaa Lys 30 gaa Glu	Ala 15 gta Val ctg Leu	aaa Lys gat Asp	96 144
169 170 171 173 174 175 177 178 179	atg Met 1 ttt Phe gat Asp	aga Arg tgc Cys gct Ala	att Ile ctt Leu gaa Glu 35 agc	caa Gln cct Pro 20 gat Asp	cat His 5 gtt Val cag Gln	Phe ttt Phe ttg Leu atc	Arg ggt Gly ggt Gly ctt	Val cac His gca Ala 40 gag	Ala cca Pro 25 cga Arg	Leu 10 gaa Glu gtg Val ttt	acg Thr ggt Gly	ctg Leu tac Tyr	Phe gtg Val atc Ile 45 gaa	Phe aaa Lys 30 gaa Glu gaa	Ala 15 gta Val ctg Leu	Ala aaa Lys gat Asp	96
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169 170 171 173 174 175 177 178 179 181 182 183	atg Met 1 ttt Phe gat Asp ctc Leu cca	aga Arg tgc Cys gct Ala aac Asn 50 atg	att Ile ctt Leu gaa Glu 35 agc Ser	caa Gln cct Pro 20 gat Asp ggt Gly	cat His 5 gtt Val cag Gln aag Lys	ttt Phe ttg Leu atc Ile ttt	ggt Gly ggt Gly ctt Leu 55 aaa	val cac His gca Ala 40 gag Glu	Ala cca Pro 25 cga Arg agt Ser ctg	Leu 10 gaa Glu gtg Val ttt Phe cta	acg Thr ggt Gly cgc Arg	ctg Leu tac Tyr ccc Pro 60 ggc	gtg Val atc Ile 45 gaa Glu	Phe aaa Lys 30 gaa Glu gaa Glu	Ala 15 gta Val ctg Leu cgt Arg	Ala aaa Lys gat Asp ttt Phe	96 144
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169 170 171 173 174 175 177 181 182 183 185 186	atg Met 1 ttt Phe gat Asp ctc Leu cca Pro 65	aga Arg tgc Cys gct Ala aac Asn 50 atg Met	att Ile ctt Leu gaa Glu 35 agc Ser atg Met	caa Gln cct Pro 20 gat Asp ggt Gly agc Ser	cat His 5 gtt Val cag Gln aag Lys act	Phe ttt Phe ttg Leu atc Ile ttt Phe 70	ggt Gly ggt Gly ctt Leu 55 aaa Lys	val cac His gca Ala 40 gag Glu gtt val	Ala cca Pro 25 cga Arg agt ser ctg Leu	Leu 10 gaa Glu gtg Val ttt Phe cta Leu	acg Thr ggt Gly cgc Arg tgt Cys 75	ctg Leu tac Tyr ccc Pro 60 ggc Gly	Phe gtg Val atc Ile 45 gaa Glu gcg Ala	Phe aaa Lys 30 gaa Glu gaa Glu gta Val	Ala 15 gta Val ctg Leu cgt Arg tta Leu	Ala aaa Lys gat Asp ttt Phe tcc Ser 80	96 144 192 240
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169 170 171 173 174 175 177 178 181 182 183 185 186 187 189 190	atg Met 1 ttt Phe gat Asp ctc Leu cca Pro 65 cgt Arg cag	aga Arg tgc Cys gct Ala aac Asn 50 atg Met gtt Val aat	att Ile ctt Leu gaa Glu 35 agc Ser atg Met gac Asp	caa Gln cct Pro 20 gat Asp ggt Gly agc Ser gcc Ala	cat His 5 gtt Val cag Gln aag Lys act Thr ggg Gly 85 gtt	Phe ttt Phe ttg Leu atc Ile ttt Phe 70 caa Gln gag	ggt Gly ggt Gly ctt Leu 55 aaa Lys gag Glu	Val cac His gca Ala 40 gag Glu gtt Val caa Gln tca	Ala cca Pro 25 cga Arg agt Ser ctg Leu ctc Leu cca	Leu 10 gaa Glu gtg Val ttt Phe cta Leu ggt Gly 90 gtc	acg Thr ggt Gly cgc Arg tgt Cys 75 cgc Arg	ctg Leu tac Tyr ccc Pro 60 ggc Gly cgc Arg	Phe gtg Val atc Ile 45 gaa Glu gcg Ala ata Ile aag	Phe aaa Lys 30 gaa Glu gaa Glu gta Val cac His	Ala 15 gta Val ctg Leu cgt Arg tta Leu tat Tyr 95 ctt	Ala aaa Lys gat Asp ttt Phe tcc ser 80 tct ser acg	96 144 192 240 288
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169 170 171 173 174 175 177 178 181 182 183 185 186 187 190 191 193 194	atg Met 1 ttt Phe gat Asp ctc Leu cca Pro 65 cgt Arg cag Gln	aga Arg tgc Cys gct Ala aac Asn 50 atg Met gtt Val aat Asn	att Ile ctt Leu gaa Glu 35 agc Ser atg Met gac Asp	caa Gln cct Pro 20 gat Asp ggt Gly agc Ser gcc Ala ttg Leu 100	cat His 5 gtt Val cag Gln aag Lys act Thr ggg Gly 85 gtt Val	Phe ttt Phe ttg Leu atc Ile ttt Phe 70 caa Gln gag Glu	ggt Gly ggt Gly ctt Leu 55 aaa Lys gag Glu tac	Cac His gca Ala 40 gag Glu gtt Val caa Gln tca Ser	Ala cca Pro 25 cga Arg agt Ser ctg Leu ctc Leu cca Pro 105	Leu 10 gaa Glu gtg Val ttt Phe cta Leu ggt Gly 90 gtc Val	acg Thr ggt Gly cgc Arg tgt Cys 75 cgc Arg aca Thr	ctg Leu tac Tyr ccc Pro 60 ggc Gly cgc Arg	Phe gtg Val atc Ile 45 gaa Glu gcg Ala ata Ile aag Lys	Phe aaa Lys 30 gaa Glu gaa Glu gta Val cac His cat His	Ala 15 gta Val ctg Leu cgt Arg tta Leu tat Tyr 95 ctt Leu	Ala aaa Lys gat Asp ttt Phe tcc Ser 80 tct Ser acg Thr	96 144 192 240 288
169 170 171 173 174 175 177 178 181 182 183 185 186 187 199 191 193 194 195	atg Met 1 ttt Phe gat Asp ctc Leu cca Pro 65 cgt Arg cag Gln	aga Arg tgc Cys gct Ala aac Asn 50 atg Met gtt Val aat Asn	att Ile ctt Leu gaa Glu 35 agc Ser atg Met gac Asp gac	caa Gln cct Pro 20 gat Asp ggt Gly agc Ser gcc Ala ttg Leu 100 aca	cat His 5 gtt Val cag Gln aag Lys act Thr ggg gtt Val gta	Phe ttt Phe ttg Leu atc Ile ttt Phe 70 caa Gln gag Glu aga	ggt Gly ggt Gly ctt Leu 55 aaa Lys gag Glu tac Tyr	Val cac His gca Ala 40 gag Glu gtt Val caa Gln tca ser tta	Ala cca Pro 25 cga Arg agt Ser ctg Leu cca Pro 105 tgc	Leu 10 gaa Glu gtg Val ttt Phe cta Leu ggt Gly 90 gtc Val agt	acg Thr ggt Gly cgc Arg tgt Cys 75 cgc Arg aca Thr	ctg Leu tac Tyr ccc Pro 60 ggc Gly cgc Arg gaa Glu	Phe gtg Val atc Ile 45 gaa Glu gcg Ala ata Ile aag Lys ata	Phe aaa Lys 30 gaa Glu gaa Glu gta Val cac His cat His	Ala 15 gta Val ctg Leu cgt Arg tta Leu tat Tyr 95 ctt Leu atg	Ala aaa Lys gat Asp ttt Phe tcc Ser 80 tct Ser acg Thr	96 144 192 240 288 336

Input Set : A:\PTO.YF.txt

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206	Glu	Leu	Thr	Ala	Phe	Leu	His	Asn	Met	Gly	Asp	His	Val	Thr	Arg	Leu		
207	145					150					155					160		
209	gat	cgt	tgg	gaa	ccg	gag	ctg	aat	gaa	gcc	ata	cca	aac	gac	gag	cgt		528
	Asp																	
211	_				165					170				-	175			
213	gac	acc	acg	atg	cct	gca	gca	atg	gca	aca	acg	ttg	cgc	aaa	cta	tta		576
214	Asp	Thr	Thr	Met	Pro	Ala	Ala	Met	Ala	Thr	Thr	Leu	Arg	Lys	Leu	Leu		
215	_			180					185					190				
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218	Thr	Gly	Glu	Leu	Leu	Thr	Leu	Ala	Ser	Arg	Gln	Gln	Leu	Ile	Asp	Trp		
219			195					200					205					
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	Met																	
223		210					215					220						
225	gct	ggc	tgg	ttt	att	gct	gat	aaa	tct	gga	gcc	ggt	gag	cgt	ggg	tct		720
226	Ala	Gly	Trp	Phe	Ile	Ala	Asp	Lys	Ser	Gly	Ala	Gly	Glu	Arg	Gly	Ser		
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229	cgc	ggt	atc	att	gca	gca	ctg	ggg	cca	gat	ggt	aag	CCC	tcc	cgt	atc		768
230	Arg	Gly	Ile	Ile	Ala	Ala	Leu	Gly	Pro	Asp	Gly	Lys	Pro	Ser	Arg	Ile		
231					245				•	250					255			
233	gta	gtt	atc	tac	acg	acg	999	agt	cag	gca	act	atg	gat	gaa	cga	aat		816
234	Val	Val	Ile	Tyr	Thr	Thr	Gly	Ser	Gln	Ala	Thr	Met	Asp	Glu	Arg	Asn	•	
235				260					265					270				
237	aga	cag	atc	gct	gag	ata	ggt	gcc	tca	ctg	att	aag	cat	tgg				858
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	Pro	Met	Met	Ser	Thr		Lys	Val	Leu	Leu	_	Gly	Ala	Val	Leu			
261		_		_		70					75		_ =			80		
	Arg	Val	Asp	Ala	-	Gln	Glu	Gln	Leu	-	Arg	Arg	Ile	His	_	Ser		
264		_			85				_	90			_		95	_,		
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Input Set : A:\PTO.YF.txt

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278	Asp	Arg	Trp	Glu	Pro	Glu	Leu	Asn	${\tt Glu}$	Ala	Ile	Pro	Asn	Asp	Glu	Arg	
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288		210					215					220					
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	225					230					235					240	
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297				260					265					270			
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306 308 309 310 311 313 314 315 316 318 319 320 322	<213 <226 <223 <223 <400 atg Met 1 ttg Leu	3 > OI 0 > FI 1 > NI 2 > LO 3 > O' 0 > SI 999 Gly 99t Gly	YPE: RGAN: RGAN: RATUI AME/I CCAT: THER EQUEI CCAC His gca Ala	DNA ISM: RE: KEY: ION: INFO CCa Pro cga Arg 20 agt	Escl CDS (1) 5 gaa Glu 5 gtg Val	(79 FION acg Thr ggt Gly cgc	etg ctg Leu tac Tyr	gtg Val atc Ile	amaso aaa Lys gaa Glu 25 gaa	gta Val 10 ctg Leu	Lys gat Asp ttt	ctc Leu cca	Ala aac Asn atg	agc Ser 30 atg	Asp 15 ggt Gly agc	Gln aag Lys act	
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306 308 309 310 311 313 314 315 316 318 329 322 323 324 326 327 328 330 331 332	<213 <226 <227 <227 <400 atg Met 1 ttg Leu atc Ile ttt Phe caa Gln 65	3 > OI 0 > FI 1 > NI 2 > LO 3 > O' 0 > SI Gly Gly ctt Leu aaa Lys 50 gag Glu	YPE: RGAN: RGAN: RAME/I CAT: FHER CAC His GCA Ala Glu 35 gtt Val Caa Gln	DNA ISM: RE: REY: ION: CCa Pro Cga Arg 20 agt Ser ctg Leu ctc Leu	CDS (1) CRMA' 5 gaa Glu 5 gtg Val ttt Phe cta Leu ggt Gly	(79 ION acg Thr ggt Gly cgc Arg tgt Cys cgc Arg 70	ctg Leu tac Tyr ccc Pro ggc Gly 55 cgc Arg	gtg Val atc Ile gaa Glu 40 gcg Ala ata Ile	amase aaa Lys gaa Glu 25 gaa Glu gta Val cac	gta Val 10 ctg Leu cgt Arg tta Leu tat Tyr	gat Asp ttt Phe tcc Ser tct Ser 75	Asp ctc Leu cca Pro cgt Arg 60 cag Gln	Ala aac Asn atg Met 45 gat Asp aat	agc Ser 30 atg Met gac Asp	Asp 15 ggt Gly agc Ser gcc Ala ttg Leu	Gln aag Lys act Thr ggg Gly gtt Val 80	96 144 192 240
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RAW SEQUENCE LISTING ERROR SUMMARY

DATE: 08/23/2004

PATENT APPLICATION: US/10/656,029

TIME: 10:36:29

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\08232004\J656029.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:27; N Pos. 4,5,6,7,9,10,11,12,14

Seq#:28; N Pos. 6,7,8,9

Seq#:39; N Pos. 892

Seq#:41; N Pos. 9040

Seq#:51; N Pos. 2626

Seq#:73; N Pos. 1528

Seq#:76; N Pos. 8885

Seq#:79; N Pos. 9953

VERIFICATION SUMMARY

DATE: 08/23/2004

PATENT APPLICATION: US/10/656,029

TIME: 10:36:29

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\08232004\J656029.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number L:1874 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0 L:1892 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0 L:2044 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:840 L:2421 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:9000 L:3393 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:2580 L:4264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:1500 L:4790 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:8880 L:5239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:79 after pos.:9900